

1 Q. Is everything that you have reviewed and relied
2 upon listed in the two reports, Exhibits 3 and
3 4, or are there others?

4 A. There's other things that -- because I've done
5 this for so long that were in my head, and I
6 just now have in the file that's not listed on
7 the report.

8 Q. Can you tell me, for instance, you're saying
9 they're in the file but --

10 A. Right, right.

11 Q. -- they're not listed on the report?

12 A. Right. In other words, there was a big file of
13 standards that I just pulled together for
14 today's benefit. That would be an example.

15 Q. Okay. This is called design standards.

16 A. Right.

17 Q. When did you pull this together?

18 This was for today's deposition?

19 A. Over the last week or so.

20 Q. Okay. And I have not looked at this. These are
21 various ISO --

22 A. All kinds of standards.

23 Q. -- standards.

24 A. There's a couple SAE ones in there.

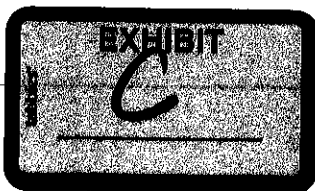
25 MR. HARTMAN: By the way, the genesis

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Christopher Ferrone

1 of those standards are the ones that were
2 mentioned in your Interrogatories, Mark.

3 BY MR. GESK:

4 Q. So that I understand, Mr. Ferrone, that in the
5 last week you went back and you looked at
6 various standards that are, according to your
7 testimony, are these applicable to this accident
8 and form a basis of your opinion?

9 A. Some are exactly on point, because they have the
10 title earth-moving equipment and so on and so
11 forth. And then they have highlighted elements
12 of them within that talk about exactly these
13 issues.

14 And then there are some that are
15 generic that talk about machine design, and then
16 there are some that are off the subject on other
17 machinery that has nothing to do with this
18 machine but shows the similar sort of
19 synergistic philosophy.

20 Q. Just so I get a sense of this, I'll just pull
21 out one. You can tell me, it's called the
22 Department of Defense Design Criteria Standard,
23 Human Engineering, dated December 5, 2003.

24 I take it that the Department of
25 Defense is the author of this document?

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1 was fair.

MR. HARTMAN: Off the record.

2 - - - -
(There was a discussion off the record.)

3 - - - -
4 BY MR. GESK:

5 Q. Are there standards here that you find to be
6 more significant, more relevant than others?

7 A. Yes, today.

8 Q. Can you tell me what ones those are?

9 MR. HARTMAN: That's fair.

10 MR. GESK: Okay.

11 THE WITNESS: See, we run into the
12 same problem because I have to go back and read
13 every one.

14 MR. HARTMAN: Just give him the
15 standard.

16 THE WITNESS: I understand that, but
17 I still have to read every one to see what I
18 highlighted. The same analysis would have to be
19 done as we were doing earlier.

20 BY MR. GESK:

21 Q. Well, I don't know any way around this, you
22 know. I really don't. I need to know what
23 you're relying on. You said all of these

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standards. And then I said of those, which ones are the ones that you find particularly appropriate to this case.

A. And I'm not -- I'm just saying it's a time issue. It's the same analysis, that I thought

the fix was just tell you and let's move on.

But we've lost that advantage because I have to read every annotation, and the analysis still takes the same amount of time.

Q. Okay.

A. I mean, I'm happy to do it, but we're going to run out of time. I'm not resisting, I'm just telling you my concern.

Q. Well, I don't know how else to do it, I'm sorry.

MR. HARTMAN: Off the record.

- - - -

(There was a discussion off the record.)

- - - -

BY MR. GESK:

Q. I mean, as I read your report, I don't see any standards listed; is that fair?

A. Yes.

Q. So this is all standards that you put together, at least you've copied in the last week?

A. That's right.

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1 at the work station. But First Energy is not
2 the manufacturer, so I don't necessarily know if
3 we can hold them responsible to redesign the
Bobcat. That's why I have a problem with that
particular question.

4 Q. Again, to the extent that you've already
5 answered this question, please tell me. Have
6 you designed any controls for a throttle or for
7 actuators, the controls using these particular
8 standards?

9 A. No.

10 Is that all of them back? Do we have
11 the whole set?

12 Q. Yes. I don't have any others.

13 Why, sir, were these standards not
14 part of your report?

15 A. Well, I knew they existed, and I was able to
16 give the opinions without -- I mean, I already
17 for years have used these, and so it's simply
18 the answer. It was in my head.

19 MR. HARTMAN: And I object to your
20 saying that they weren't part of the report.
21 The information and premises of what he relied
22 upon were part of the report. It's like saying
23 why isn't a dictionary part of the report

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1 kind of something that I've used over time.

2 But what I do know you'll most likely
3 find are these elements discussing that you have
4 to go through them and make sure that all of
5 these things are satisfied, and if they aren't

6 satisfied, you can deal with the reason and you
7 move on from there. So, yes, these elements are
8 going to be found.

9 Q. Prior to writing your report of June 27, 2006,
10 did you perform any research?

11 A. Little open-ended. In what regard?

12 Q. In regard to looking at -- obviously you have
13 documents reviewed, okay, that are listed here,
14 but in regard to a review of any types of
15 published paper, any types of published
16 standards that you reviewed, any types of
17 studies of skid steer loaders, backhoes.

18 A. I understand. Throughout the summer, I can't
19 tell you exactly when it was done, but
20 throughout the summer, I conducted two surveys,
21 let's call them. One survey was -- and my
22 engineering assistant did most of that through
23 my guidance; I did a little of it -- was to go
24 to different other equipment rental facilities
25 and dealerships and see all of the different

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1 designs for backhoe controls, how they're
2 guarded, are they guarded, what do their control
schemes look like, how are they laid out.
That's in the file.

3 Q. Where is that, I'm sorry?

4 A. Equipment survey.

5 Q. Could you pull that for me, please? Thank you.

6 A. Now, just so we're perfectly clear, in the other
7 folder where you've got my testing DVD from,
8 there's also a CD of photographs that were taken
9 on my behalf on one of the days -- I ran out of
10 film, so the person I was with had a digital
11 camera, so I said take these pictures. So the
12 person just simply operated the camera and then
13 put them on a disk and sent them to me.

14 So we have that survey and that type
15 of information.

16 The other thing that was done was, I
17 sent out the engineering assistant with another
18 engineering assistant because it took two people
19 do to this, different construction sites around
20 Chicago, and they photographed the use of
21 backhoes, whether Bobcats or -- you know, I just
22 said go look at backhoes, okay, just to be
23 honest. And they got pictures of people inside

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1 the excavation adjacent to the boom, so on and
2 so forth.

3 So that research survey was done as
4 well, and that's in the file.

5 Q. So for instance, I just pulled out of your file,
6 there's a photograph. You have handwritten down
7 here, John Deere pro 911 skid steer attachment.
8 Looks like a backhoe.

9 A. Could I just see that real quick?

10 Q. Does that describe what you did?

11 A. It does. That's essentially --

12 Q. Survey.

13 A. Yes, those kind of things you will find in the
14 file.

15 Q. On this particular photograph, is there any
16 guarding of the controls?

17 A. I would say this isn't a great angle, but the
18 box that the controls reside in are wide enough
19 that your knee will strike the box before it
20 strikes the control; so that in and of itself
21 would provide guarding.

22 Q. And did that form a basis of your opinion during
23 this survey of the other machines that you
24 looked at?

25 A. The basis that it provides is to show not only

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1 somebody in the swing radius would not be
2 acceptable.

3 Q. Is it your opinion that the best way of keeping
4 people safe is keeping them out of the swing
5 boom area?

6 A. When it's in operation, yes. When it's not in
7 operation, part of the utility of the machine
8 requires you to get within the swing radius.
9 That's how you use the machine.

10 Q. What is your definition of operation?

11 A. Performing work to dig or lift or transport.

12 Q. If the engine is powered up and the hydraulics
13 are powered, is that in operation?

14 A. If the boom is stationary, no.

15 Q. And how do you come about this definition?
16 What's your basis for it?

17 A. Well, if you look at the website and all of the
18 brochures for this machine and any other like
19 it, they talk about its acute ability to dig
20 very accurately, which implies that it digs up
21 gas lines, gas mains, electrical, dangerous
22 things. You know, it's used for that.

23 The manuals clearly state that when
24 you get near one of those underground utilities,
25 that's dangerous, that you stop digging with the

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1 machine and visually look which forces a laborer
2 of some sort to be within the swing radius.

3 So operation can only mean by all of
4 that logic and implication performing work by
5 either transportation, moving the machine,
6 lifting or digging.

7 When it's idling, that's certainly
8 not, because there is no information in the
9 manual that says when you go to observe this
10 fine-tuning process that you're trying to do,
11 turn off the engine and all of those type of
12 things, I don't believe it says that when you
13 get in the swing radius. Therefore, the only
14 definition you could possibly come to is what I
15 just said.

16 Q. And is that particular opinion as to operation,
17 do you know of any other sources that
18 corroborate that?

19 A. I'm fairly comfortable that if we looked at
20 other manuals, you would find a similar either
21 direct admonition or implicit one.

22 Q. Can you point to one or can you tell me of one
23 or --

24 A. The fact that a --

25 Q. -- cite one now?

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1 A. No, but the fact that I cannot does not negate
the fact that it's there.

2 Q. I understand that, but I'm asking for your
information.

3 A. Well, I mean, I'm going to give -- I can give
4 you an opinion, and I've given you the basis of
5 it, and part of the basis is Bobcat's own
6 documents on how to use the machine.

7 Can I cite chapter and verse, a John
8 Deere book? No, I cannot. Am I willing to say
9 there is one out there? Mostly likely there is.

10 Q. On 13, you talk about the negligent behavior of
11 Bobcat for failing to warn and train.

12 Have we covered all of your warning
13 issues? Are there any other opinions on
14 warnings that we haven't covered?

15 A. I think you're just about to ask me one, aren't
16 you?

17 Q. Well, you talked about the warnings, first of
18 all, on the machine 10 feet.

19 A. Yes.

20 Q. Any other warning that you find in your opinion
21 negligent?

22 A. What you're about to describe and ask in 13.

23 Q. Okay.

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1 A. Right, because you're not training my mother,
2 and my mother could walk past the machine. So
3 you certainly have to train the people that you
4 have control of; in this instance, First Energy.

5 But when you train those people, the
6 training has to be appropriate.

7 Q. So you're --

8 A. There's an endless list of people you didn't
9 train that work at First Energy that had the
10 potential to be around this circumstance; so,
11 therefore, the only thing you can do is control
12 the people that you do train.

13 Q. So, again, you're not of the opinion that Leppo
14 should have trained Mr. Altman?

15 A. No.

16 Q. Going back to the September 7 of 2006 report,
17 page 2, the conclusions and opinions section.

18 A. Yes.

19 Q. Number 3, I think it's part of number 3. It's
20 actually not numbered. It's right next to it.
21 It says operation is defined as digging,
22 providing work or utility.

23 A. Yes.

24 Q. Where does that definition come from?

25 A. Well, I think we obviously talked about that

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1 in -- to great lengths at the beginning. I
2 can't site chapter and verse, but I'm happy to
3 take the challenge. Next time we're together,
4 I'm happy to bring a bunch of books that discuss
5 something like that or imply that definition

6 that simply bolster an opinion that I'm giving
7 now.

8 Q. Is there an industry publication that --

9 A. Well, hold on, hold on. Understand something.

10 The fact that the engine is running is providing
11 no work, because the purpose of this machine is
12 to move, lift or dig. Idling does not provide
13 any of those functions; therefore, that can't be
14 operation.

15 Is it running? Yes. Are the
16 hydraulics activated? Maybe. But that is not
17 operation.

18 Now, I know everybody wants to mince
19 words and make this a semantics argument, but
20 from an engineering standpoint, you line up 10
21 engineers and tell them that, they're all going
22 to tell you, that's not operation because it's
23 not doing these three things.

24 And the reason that I can get to that
25 is that all of the training information say stay

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1 away when it's moving. It doesn't say -- and it
2 then goes on to boast how delicate this machine
3 that can dig and when you get close to something
4 dangerous, look at it.

5 I got a whole file folder of
6 construction workers in holes that I had no
7 control over. That's how it's done in reality.
8 They go into the hole or they approach the
9 machine when it's not moving. I mean, I get
10 that implicitly.

11 Q. And as I understand it, you are not of the
12 opinion that Leppo should have warned that while
13 this is not in operation to keep people out of
14 the swing zone?

15 A. Right. What they should have warned about is
16 the potential for the contact with the controls,
17 because that would have helped when it's not in
18 operation, that hazard.

19 Q. And I understand you advised me that that is
20 your opinion, but as I understand it, you are
21 not of the opinion that Leppo should have
22 trained the operator to keep people out of the
23 swing zone in a situation such as what you have
24 here where there is a boom that is resting but
25 the engine is still on?

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1 Q. Given that information, does that change your
opinion?

2 A. No.

3 Q. You testified at length about ISO 6165. Come
back. Why is that applicable to the backhoe

4 attachment. 6165 it's right --

5 A. I didn't even know -- this one here, 6165?

6 Q. Yes.

7 A. It's not. What we were trying to do is come up

8 with a definition for operation. When I saw

9 this, it said terminology for earth-moving

10 equipment, so this is kind of a misfire.

11 Q. So you'll agree that it doesn't apply?

12 A. I agree.

13 Q. Do you see any risks or hazards presented by the

14 bending of the control levers?

15 A. Respectfully, that's a little open-ended. In

16 the manner it's currently or at all?

17 Q. In the manner that the First Energy remediation

18 or modification occurred.

19 A. In their depositions, they said it poses no

20 problems. I would assume we would have heard

21 about it by now. They have a lot to lose. And

22 not only do I think it's still there in that

23 condition, they separately respond that it's not

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1 A. Yes.

2 Q. And what you have in support of that is the
3 single ANSI standard that you don't have here
4 today?

5 MR. HARTMAN: No, no, that was asked
6 and answered. That's a totally unfair
7 mischaracterization of it. Ask another
8 question.

9 BY MS. BLACKMER:

10 Q. In support of that second opinion, you did say
11 that there's ANSI standards.

12 A. I believe there's an ANSI standard that
13 describes how to design a warning.

14 I further believe that it gives the
15 sort of recipe on how to do that.

16 And I further believe that once
17 something has occurred, one of those elements is
18 what to tell them to do after. So that's one
19 opinion.

20 Q. Okay.

21 A. Okay.

22 Q. You believe that's out there.

23 What else is there out there in
24 support of your opinion?

25 MR. HARTMAN: That's asked and

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